



This Engineering Heritage Marker was unveiled on 11 March 2017

Engineering Heritage Sydney  
Eurobodalla Shire Council



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## MORUYA GRANITE

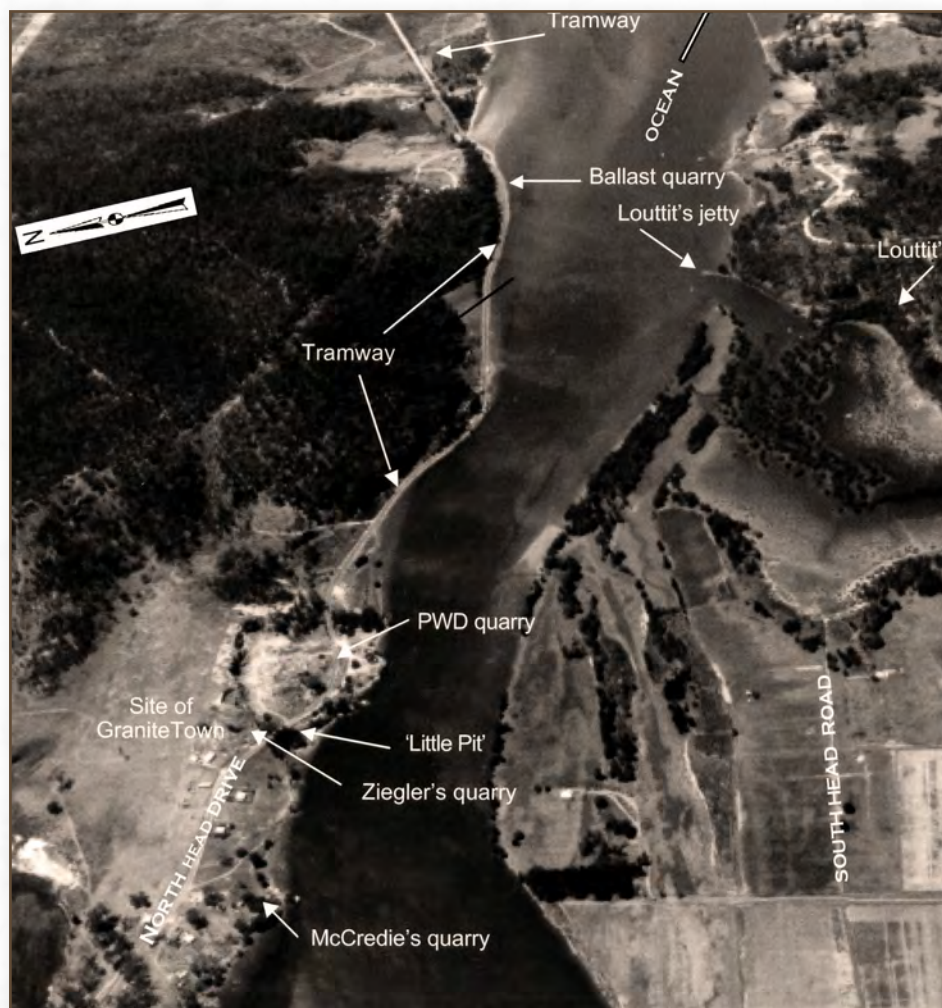
*Because of its quality, Moruya 'granite' (Granodiorite or Tonalite depending on which quarry it came from) was used in the river's breakwaters, in buildings and monuments in NSW, and in cladding the pylons and piers of the Sydney Harbour Bridge.*



QUARRYING FOR THE BREAKWATER, 1947  
(B. Clifford, Moruya)

## THE QUARRIES

The first quarry was opened in about 1864 by Henry Ziegler who supplied stone for monuments and church buildings in Moruya.



ROGERS, B  
(1997)

In 1876 parts of Ziegler's land were resumed for a Government (PWD) Quarry to provide rock for the river's northern breakwater and riverbank protection. Then from 1925 to 1932 the Sydney Harbour Bridge contractor used the quarry. The Government Quarry continues to operate on an as needs maintenance basis.

Stone for the colonnade columns and steps of Sydney's General Post Office (GPO) and for the base of Captain Cook's statue in Hyde Park, came from a quarry opened on the Loutitt brothers land by John Young in about 1868.

And from about 1875, the Loutitt brothers provided stone from the quarry for the Bank of NSW in Moruya.

McCredie Brothers, the contractor for stage 2 of the GPO used stone from a quarry on Ziegler's for the remaining colonnade columns and steps. They also provided the base of the Queen Victoria statue in Sydney.

## SYDNEY HARBOUR BRIDGE

Dorman Long the contractor for the Sydney Harbour Bridge used stone from the Government Quarry and an adjacent one to clad the pylons and piers of the bridge; in all it used 20,600 cubic yards of stone in 40,000 pieces.



CLADDING PYLON OF SYDNEY HARBOUR BRIDGE WITH MORUYA STONE  
(1931)

Crushed stone from the quarry was used in the concrete. All the stone was transported by three steam ships constructed at the Newcastle State Dockyard.



LOADING FIRST SHIPMENT ON STEAMSHIP 'SIR ARTHUR DORMAN'  
(R. Parsons, Australasian Maritime Historical Society)

The quarry also supplied the stone for Sydney's Martin Place Cenotaph.



MORUYA QUARRY: ALTAR STONE FOR MARTIN PLACE CENOTAPH  
(State Records NSW from Series No. 12685)

## QUARRYING THE HARD ROCK

In the quarry a power station powered most of the equipment including compressors which supplied air for rock drills, stone surfacers and rock dressing tools.

Large blocks of dimension stone were produced by exploding black blasting powder in lines of holes drilled in the rock.

Stone for cladding the piers and pylons was split from the blocks by inserting steel 'feathers' into a line of holes and driving in steel plugs or wedges.



PLUGS AND FEATHERS USED TO MANUALLY SPLIT ROCK  
(J. Gibson)

## SHAPING THE ROCK

Skilled masons dressed blocks of stone to size and shape, with the blocks being finished by surfacing machines.



THE STONE DRESSING SHED  
(11.6.1926 AONSW)



DRESSING STONE WITH PNEUMATIC GRINDER  
(Cains 1935)



LARGE ROCK SPLIT WITH PLUGS AND FEATHERS  
(H. Greig)

## GRANITE TOWN

The workmen were predominately Australians, Scots and Italians and were housed in Granite Town, a village constructed by Dorman Long. In March 1927 the population was 304.



GRANITE TOWN, BUILT FOR THE QUARRY WORKERS  
(11.6.1926 AONSW)



QUARRY MASONS

## PROMINENT PEOPLE



### EDWARD ORPEN MORIARTY

(1821-1896)

The Engineer-in-Chief, Harbours & Rivers of the NSW Public Works Department who oversaw many harbour and river improvement works including the Moruya River breakwaters.



### JAMES BARNET

(1827-1904)

Colonial Architect who oversaw a prodigious amount of public building in NSW including the Sydney General Post Office.



### DR J J C BRADFIELD

(1867-1943)

A brilliant civil engineer who was associated with a great range of engineering work. As Chief Engineer for Metropolitan Railway Construction & Sydney Harbour Bridge, Bradfield oversaw the design and construction of Sydney's transport system including the Sydney Harbour Bridge.



### LAWRENCE ENNIS

(1871-1938)

An engineer who had worked on a number of bridges throughout the world, Ennis signed the contract for the Sydney Harbour Bridge on behalf of Dorman Long and was their Director of Construction.



### JOHN A. GILMORE

(1877- 1965)

A Scottish stonemason, Gilmore was manager of the Moruya Granite Quarry. He arrived in Sydney in September 1924 and finished in 1931.

## A HERITAGE PRECINCT

*In recognition of the heritage significance of the quarry and Granite Town, and particularly their association with the Sydney Harbour Bridge, the NSW Government has acquired much of the original site to conserve it, and as a resource for maintenance of the breakwaters and river bank.*

